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# **HQ-IFS Maintenance Resource Prediction Model (MRPM) System Manual**

by  
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Maintenance Resource Prediction Models (MRPMs) are a set of models that run on various computer systems to assist Army managers to plan and program maintenance resources, based on the anticipated resource requirements of actual installation facilities, for prediction periods of 1 to 10 years.

This manual is a self-teach document that provides a hands-on description of procedures that assist in learning, operating, and maintaining the Headquarters-Integrated Facilities System (HQ-IFS) MRPM system. Included are descriptions of program flow from subroutine to subroutine, all standard or common subroutines needed for writing or modifying program code, and all standard common blocks required for programming. Standard programming packages used in the MRPM system are listed. Also included are procedures for maintenance, operation, and system management, and an outline of the resources required to support the MRPM system.

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## FOREWORD

This research was conducted for Headquarters, U.S. Army Corps of Engineers (HQUSACE) and the Office of the Assistant Chief of Engineers (OACE) under various Research, Development, Testing, and Evaluation (RDTE) and reimbursable funding documents. Work began under RDTE in 1980 and continued in reimbursable projects from 1984 to 1989. The technical monitor for the RDTE part was Dr. Larry Schindler, CEMP-ECE, and at the termination of the project, Mr. Edward Davis, CEHSC-FM-R. The technical monitor for the reimbursable part was Ms. Val Corbridge, DAEN-ZCP-B.

The work was performed by the Facility Systems Division (FS), U.S. Army Construction Engineering Research Laboratory (USACERL). The Principal Investigators were Dr. Edgar Neely and Mr. Robert Neathammer. The primary contractor for much of the data development was the Department of Agricultural Engineering, Pennsylvania State University. Dr. Michael J. O'Connor is Chief of FS. The USACERL technical editor was Mr. William J. Wolfe, Information Management Office.

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## 1. INTRODUCTION

The purpose of this manual is to provide a comprehensive description of each procedure to learn, operate, and maintain the HQ-IFS MRPM system. Chapter 2 describes the most efficient method for learning the functions and organization of the MRPM system. Chapter 3 defines the program flow from subroutine to subroutine. Chapter 4 contains the description of all standard or common subroutines that must be used by all programmers when writing new code or modifying existing code. Chapter 5 contains a description of all standard common blocks that must be used when programming. Chapter 6 contains a list of all the standard programming packages used in the MRPM system. Chapter 7 describes the procedure that should be followed during maintenance and operation of the system. Chapter 8 describes the overall management procedures required to operate the system. Chapter 9 describes the resource required to provide support to the MRPM system.

## 2. LEARNING THE MRPM FUNCTIONS

The first and most important step in the training of a new MRPM technician is attaining functional use of the system. The novice to this system should be given a user's manual and access to the MRPM system. The new employee should read the manual, experiment with the system, and write down all questions. Do not give the new person any verbal description of the system; all information should be gained through the user's manual.

All questions should be addressed in later versions of the user's or system manuals. If the new person had the question, so will others. This method constantly improves both the user's and system documentation.

Once the maintainer has learned the MRPM functions, the *HQ-IFS Maintenance Resource Prediction Model (MRPM) System Manual* can be used as a reference for learning how to program and maintain the system. This system manual is a self-teach document which should require approximately 1 week of learning time.

### 3. PROGRAM FLOW

The initial version of MRPM was identical to the Installation MRPM system.<sup>1</sup> After documenting that component data did not exist in the Installation IFS system, the MRPM screens were reduced to just the MACRO functional capabilities described in this report.

This chapter is divided into three major portions: (1) Modules used in the PC environment for interfacing, (2) Modules used in the CMS environment, and (3) Modules used in the NOMAD environment (Figure 3-1). A similar modular structure for interfacing with the TYMCOMM network operating system is outlined in Figure 3-2.

#### 3.1 Modules Used in the PC Environment

Six programs in the personal computer (PC) create the interface between the PC and three databases. The interface starts by calling the HQIFS.BAT in PC DOS environment. HQIFS.BAT is a batch file that sets up the path and the screen for the interface and makes a call to OCE3.DIR.

OCE3.DIR is a SIMPC file called by HQIFS.BAT that sets up the interface screen. Selection of different databases is done through three different programs: (1) TNOCE3.SIM, a SIMPC file that interfaces with the HQ-IFS Assets Database, (2) TNLEARN.SIM, a SIMPC file that interfaces with the LEARN database, set up for learning MRPM, (3) TNCERL3.SIM, a SIMPC file that interfaces with the testing databases set up for testing programs by the programmers, and (4) CMSLOG.SIM, a SIMPC file for logging off the system.

#### 3.2 Modules Used at CMS Environment

There are three different profiles that execute different job control language for each of the databases described in section 3.1.

When a user chooses TNC03.SIM to interface with the HQ-IFS Assets Database, the PROFILE EXEC of userid MPMOCE3 will be executed. When a user chooses TNLEARN.SIM to interface with the Learn Database, PROFILE EXEC of userid MPMLEARN will be executed. When the user chooses TNCERL.SIM to interface with testing database, PROFILE EXEC of userid MPMCERL3 will be executed. Each PROFILE EXEC links to a different disk and has different initial settings for the MRPM system.

#### 3.3 Modules Used in NOMAD Environment

Before entering the NOMAD environment, PROFILE NOMAD will be executed. Each different userid (MPMOCE3, MPMLEARN, or MPMCERL3) has a different setup in PROFILE NOMAD for the MPRM.

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<sup>1</sup>Maintenance Resource Prediction Model (MRPM): User's Manual, Draft ADP Report (U.S. Army Construction Engineering Research Laboratory [USACERL], June 1990).



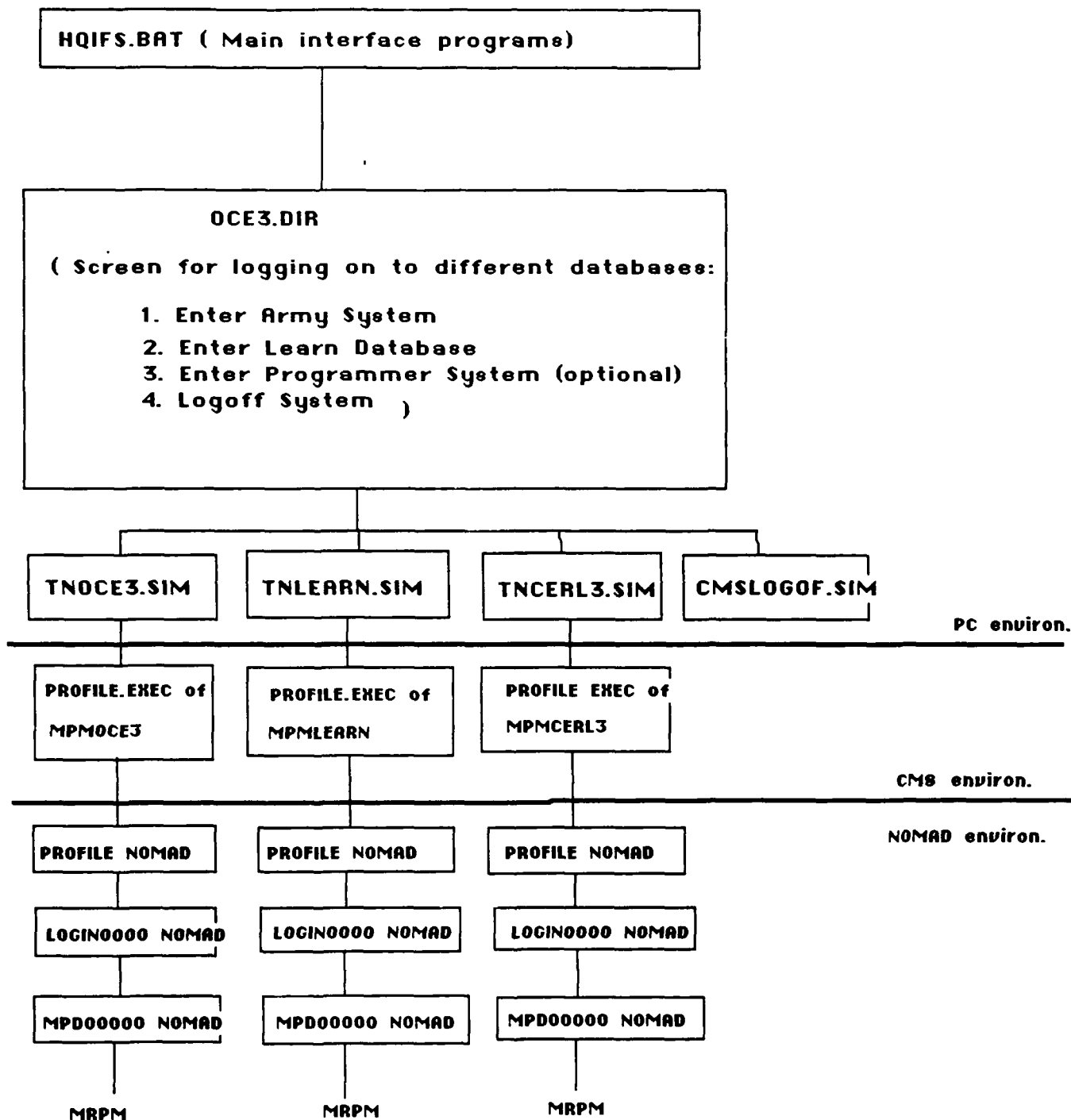


Figure 3-1. Program interface structure.

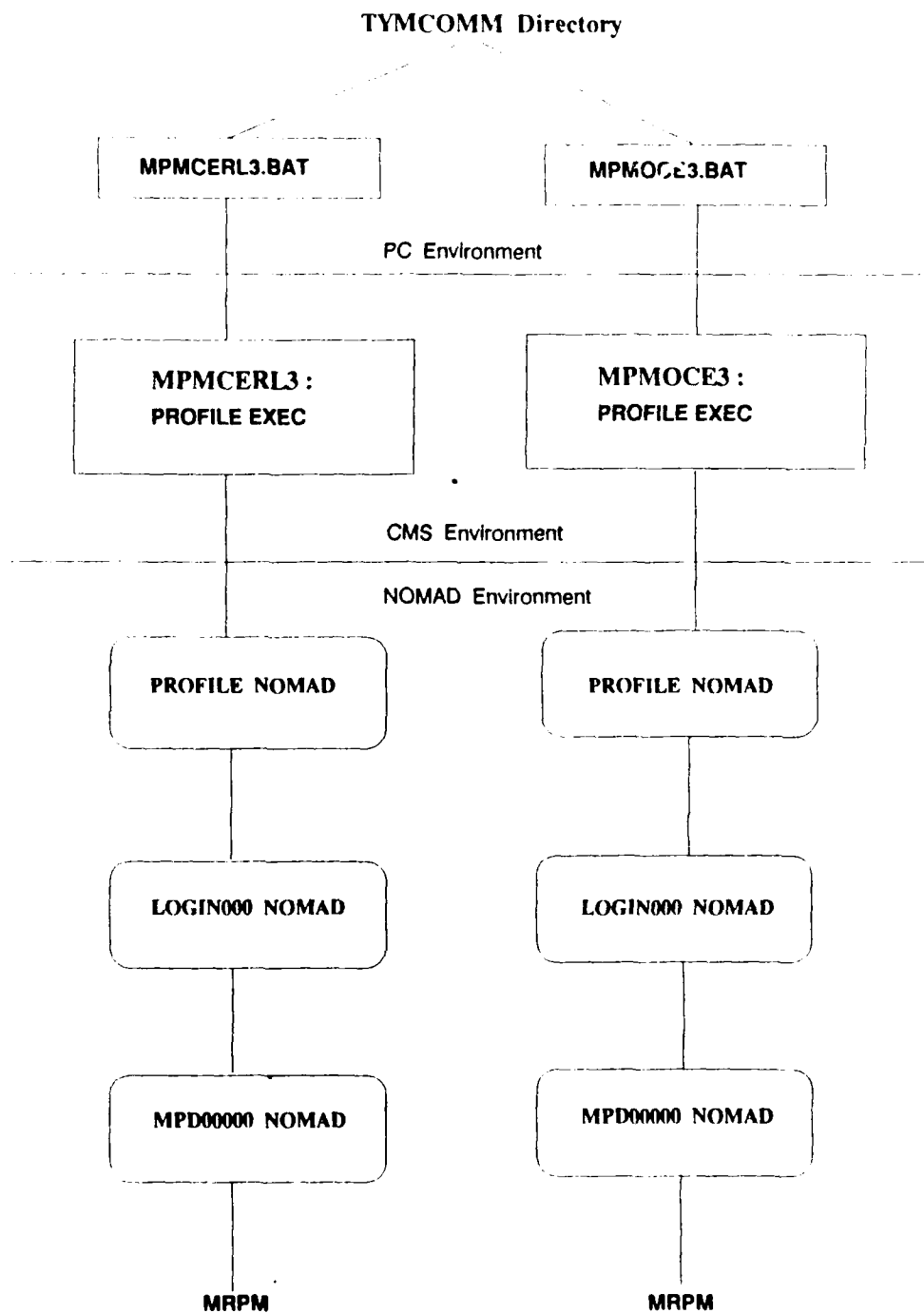


Figure 3-2. Program interface structure—TYMCOMM.

PROFILE NOMAD calls LOGIN0000 NOMAD, a screen for the user's MRPM login and password. The user must enter his authorization before using the system. After passing through the login and password, LOGIN0000 calls MPD00000, a screen for MRPM users to use the system at different priority levels, such as TOTAL ARMY, MACOM RANGE, SPECIFIC MACOM, REPORTING INSTALLATION RANGE, and REPORTING INSTALLATION. MPD00000 will call the programs for running MRPM functions.

The following three sections present the flow of MRPM functions in three different orders: (1) By MRPM functions in section 3.3.1, (2) By programs in section 3.3.2, and (3) By files in 3.3.3.

### 3.3.1 By MRPM Functions

The major MRPM functions are divided into four types: (1) Basic Information, (2) Facility Information, (3) MRPM Batch Processing, and (4) Review Current Database.

#### 3.3.1.1 Basic Information

The present MRPM version uses only General Information. If the system is further developed, this section will include Prediction Models, Facility Resource Data, and Data For Individual Facilities.

##### 3.3.1.1.1 General Information

<u>Function</u>	<u>Program</u>	<u>Files</u>
Organization Chart	MPDI1011	ORG_TABLE
	MPFI1011	ORG_TABLE
AMS-RMF Factors	GOHI1040	AMS_TAB
	GOHF1040	AMS_TAB
	GOHI1041	REL_RMF
	GOHF1041	REL_RMF
F4C Conversion Codes	MPDI1221	F4C_TAB
	MPFI1221	F4C_TAB
Report Period	MPDI1061	INST_TAB
	GOHF1061	INST_TAB
Unit Cost by Age	MPDIUC4C	UNIT_COST
	MPFIUC4C	UNIT_COST
	IDCI1000	UNIT_COST
	IDCF1000	UNIT_COST
	F4CI1000	F4C_UCID
	F4CF1000	F4C_UCID

Army Trade Cost Table

GOHI1221  
GOHF1221

TRCOSTB  
TRCOSTB

### 3.3.1.2 Facility Information

Facility information includes six functions: (1) Resource Calculation, (2) Display Resource—Table Form, (3) General Information, (4) Facility Reports (5) Model Facility, and (6) Review Current Database.

#### 3.3.1.2.1 Resource Calculation

<u>Function</u>	<u>Program</u>	<u>Files</u>
Resource Calculation	MPDI2000	INST_TAB, FACTAB, RSMY
	MPFI2000	INST_TAB, FACTAB, RSMY
	GOHI2011	INST_TAB, FACTAB, RSMY
	GOHF2011	INST_TAB, FACTAB, RSMY
	LIST0007	INST_TAB, FACTAB, RSMY
	STARTERR	INST_TAB, FACTAB, RSMY
	MPDI2011	INST_TAB, FACTAB, RSMY
	MPFI2011	INST_TAB, FACTAB, RSMY
	MPFI2012	INST_TAB, FACTAB, RSMY
	MPDI2010	INST_TAB, FACTAB, RSMY
	UNITCOST	INST_TAB, FACTAB, RSMY
	UCAG2050	INST_TAB, FACTAB, RSMY
	MPDI2040	INST_TAB, FACTAB, RSMY

#### 3.3.1.2.2 Display Resource—Table Form

<u>Function</u>	<u>Program</u>	<u>Files</u>
Display Resource	DISI2021	INST_TAB, FACTAB, RSMY
	2021HLP1	INST_TAB, FACTAB, RSMY
	2021HLP2	INST_TAB, FACTAB, RSMY

#### 3.3.1.2.3 General Information

<u>Function</u>	<u>Program</u>	<u>Files</u>
Listing of ID	LIST0003	INST_TAB
	LISTF003	INST_TAB
General Information	MPDI2051	FACTAB
	MPFI2051	FACTAB

Print General Information	LIST2051	FACTAB
Download to disk	DISK2051	FACTAB

#### 3.3.1.2.4 Facility Report

<u>Function</u>	<u>Program</u>	<u>Files</u>
Facility Report Selection	MPDI2061 MPFI2061	INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY
AMS/F4C Report	GOHI2062 GOHF2062 MPDI2062 MPFI2062 LSTI2062 LSTS2062 LSTA2062 LSTF2062 LSTF2063 FORDISKI RAMSF4C RRSCREEN SCRI2063 SCRS2063 SCRA2063 SCRB2063 PRINT001 PRIN2061 DISK2063 RRDISK FILESCR	INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY  REVIRSMY REVSRSMY REVARSMY REVFRSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY
3-Digit F4C Report	GOHI2063 GOHF2063 GOHF2064 F4C12063 F4C22063	INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY INST_TAB, FACTAB, RSMY
URR Comparison Report	URRI0000 URRF0000 LIST0003 LISTF003 LIST0009 LISTF009 URRI1000 URRF1000	URR_INFO,URR_APPR1,URR_TAB1 URR_INFO,URR_APPR1,URR_TAB1 INST_TAB INST_TAB URR_INFO,URR_APPR1,URR_TAB1 URR_INFO,URR_APPR1,URR_TAB1 URR_INFO,URR_APPR1,URR_TAB1 URR_INFO,URR_APPR1,URR_TAB1

URRHLP1	URR_INFO,URR_APPR1,URR_TAB1
LIST0003	INST_TAB
RANG2001	URR_INFO,URR_APPR1,URR_TAB1
RANF2001	URR_INFO,URR_APPR1,URR_TAB1
URRI2000	URR_INFO,URR_APPR1,URR_TAB1
URRF2000	URR_INFO,URR_APPR1,URR_TAB1
URRI2001	URR_INFO2,URR_TAB2

#### 3.3.1.2.5 Model Facility

<u>Function</u>	<u>Program</u>	<u>Files</u>
Modelling Method Selection	MODEL000 MODELF00	
Modelling Total Army Level	ARMY2082  ATIM2082  ARMF2082 AGOH2082  GOHF2082 LOAD1	INSTALLATION,FACILITY,INST_TAB, FACTAB INSTALLATION,FACILITY,INST_TAB, FACTAB, MACOM_INFO INSTALLATION,FACILITY,INST_TAB, FACTAB INSTALLATION,FACILITY,INST_TAB, FACTAB
Modelling MACOM, MACOM Range	MACO2082  MGOH2082  GOHF2082  LOAD1	INSTALLATION,FACILITY,INST_TAB, FACTAB INSTALLATION,FACILITY,INST_TAB, FACTAB INSTALLATION,FACILITY,INST_TAB, FACTAB

#### 3.3.1.2.6 Review Current Database

<u>Function</u>	<u>Program</u>	<u>Files</u>
Listing Reporting Inst. ID	LIST0002 LISTF002	INST_TAB INST_TAB

### 3.3.1.3 MRPM Batch Processing (Future Development)

<u>Function</u>	<u>Program</u>	<u>Files</u>
Batch Processing Screen		MPDI0004 BATMENU

### 3.3.1.4 Review Current Database

<u>Function</u>	<u>Program</u>	<u>Files</u>
Listing Reporting Inst. ID	LIST0002	INST_TAB LISTF002INST_TAB

### 3.3.2 By Program

The program listing is in alphabetical order.  
function and a list of files accessed.

each program there is a corresponding MRPM

<u>Program</u>	<u>MRPM Function</u>	<u>Files</u>
AGOH2082	Facility Information—Model Facility	INSTALLATION, FACILITY,INST_TAB, FACTAB
ARMF2082	Facility Information—Model Facility	INSTALLATION, FACILITY,INST_TAB, FACTAB
ARMY2082	Facility Information—Model Facility	
ATIM2082	Facility Information—Model Facility	INSTALLATION, FACILITY,INST_TAB, FACTAB
BATMENU	Facility Information—Batch Processing	INST_TAB FACTAB,RSMY
DISI2021	Facility Information—Display Resource	
DISK2051	Facility Information—General Information	INST_TAB,FACTAB INST_TAB,FACTAB, RSMY
DISK2063	Facility Information—Facility Report	
FILESCR	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
FORDISKI	Facility Information—Facility Report	
F4CF1000	Basic Information—Unit Cost by Age	F4C_UCID F4C_UCID
F4CI1000	Basic Information—Unit Cost by Age	

F4C12063	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
F4C22063	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
GOHF1040	Basic Information—AMS-RMF Factors	AMS_TAB
GOHF1041	Basic Information—AMS-RMF Factors	REL_RMF
GOHF1061	Basic Information—Report Period	INST_TAB
GOHF1221	Basic Information—Army Trade Cost Table	TRCOSTB
GOHF2011	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
GOHF2062	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
GOHF2063	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
GOHF2064	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
GOHF2082	Facility Information—Model Facility	
GOHI1040	Basic Information—AMS-RMF Factors	AMS_TAB
GOHI1041	Basic Information—AMS-RMF Factors	REL_RMF
GOHI1221	Basic Information—Army Trade Cost Table	TRCOSTB
GOHI2011	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
GOHI2062	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
GOHI2063	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
GOH2081	Facility Information—Model Facility	INSTALLATION, FACILITY,INST_TAB, FACTAB,RSMY
IDCI1000	Basic Information—Unit Cost By Age	UNIT_COST
IDCF1000	Basic Information—Unit Cost By Age	UNIT_COST
LISTF003	Facility Information—General Information	INST_TAB
LISTF002	Facility Information—Review Database	INST_TAB
LIST0002	Facility Information—Review Database	INST_TAB
LISTF003	Facility Information—Facility Report	INST_TAB
LISTF009	Facility Information—Facility Report	URR_INFO,URR_APPR1 URR_TAB1
LSTA2062	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
LSTF2062	Facility Information—Facility Report FACTAB,RSMY	INST_TAB
LSTF2063	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
LSTI2062	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
LSTS2062	Facility Information—Facility Report	INST_TAB FACTAB,RSMY



LIST0003	Facility Information—General Information	INST_TAB
LIST0003	Facility Information—Facility Report	INST_TAB
LIST0007	Facility Information—Resource Calculation	INST_TAB
LIST0009	Facility Information—Facility Report	URR_INFO,URR_APPR1 URR_TAB1
LIST2051	Facility Information—General Information	INST_TAB,FACTAB
MACO2082	Facility Information—Model Facility	INST_TAB,FACTAB
MGOH2082	Facility Information—Model Facility	INST_TAB,FACTAB
LOAD1	Facility Information—Model Facility	INSTALLATION, FACILITY,INST_TAB, FACTAB
MODELFO0	Facility Information—Model Facility	
MPDIUC4C	Basic Information—Unit Cost by Age	UNIT_COST
MPFIUC4C	Basic Information—Unit Cost by Age	UNIT_COST
MPDI0004	Facility Information—Batch Processing	
MPDI1011	Basic Information—Organization Chart	ORG_TAB
MPDI1061	Basic Information—Report Period	INST_TAB
MPDI1221	Basic Information—F4C Conversion Codes	F4C_TAB
MPDI2000	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
MPDI2010	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
MPDI2011	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
MPDI2040	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
MPDI2051	Facility Information—General Information	INST_TAB,FACTAB
MPDI2061	Facility Information—Facility Report	INST_TAB,FACTAB RSMY
MPDI2062	Facility Information—Facility Report	INST_TAB FACTAB,RSMY
MPDI2082	Facility Information—Model Facility	INSTALLATION, FACILITY, INST_TAB,FACTAB
MPFI1011	Basic Information—Organization Chart	ORG_TAB
MPFI1221	Basic Information—F4C conversion codes	F4C_TAB
MPFI2000	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
MPFI2011	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
MPFI2012	Facility Information—Resource Calculation	INST_TAB FACTAB,RSMY
MPFI2051	Facility Information—General Information	INST_TAB FACTAB,RSMY
MPFI2061	Facility Information—Facility Report	INST_TAB, FACTAB,RSMY
MPFI2062	Facility Information—Facility Report	INST_TAB FACTAB,RSMY

PRINT001	Facility Information—Facility Report	
PRIN2061	Facility Information—Facility Report	
RAMSF4C	Facility Information—Facility Report	INST_TAB,FACTAB
RANF2001	Facility Information—Facility Report	URR_INFO2,URR_TAB2
RANG2001	Facility Information—Facility Report	URR_INFO2,URR_TAB2
RRDISK	Facility Information—Facility Report	
RRSCREEN	Facility Information—Facility Report	INST_TAB,FACTAB
SCRA2063	Facility Information—Facility Report	REVARSMY
SCRB2063	Facility Information—Facility Report	REVFRSMY
SCRI2063	Facility Information—Facility Report	REVIRSMY
SCRS2063	Facility Information—Facility Report	REVSRSMY
STARTERR	Facility Information—Resource Calculation	
UCAG2050	Facility Information—Resource Calculation	INST_TAB
		FACTAB,RSMY
UNITCOST	Facility Information—Resource Calculation	INST_TAB
		FACTAB,RSMY
URRHLP1	Facility Information—Facility Report	URR_INFO,URR_APPR1
		URR_TAB1
URRF0000	Facility Information—Facility Report	URR_INFO,URR_APPR1
		URR_TAB1
URRF1000	Facility Information—Facility Report	URR_INFO,URR_APPR1
		URR_TAB1
URRF2000	Facility Information—Facility Report	URR_INFO,URR_APPR1
		URR_TAB1
URRI0000	Facility Information—Facility Report	URR_INFO,URR_APPR1
		URR_TAB1
URRI1000	Facility Information—Facility Report	URR_INFO,URR_APPR1
		URR_TAB1
URRI2000	Facility Information—Facility Report	URR_INFO,URR_APPR1
		URR_TAB1
URRI2001	Facility Information—Facility Report	URR_INFO2,URR_TAB2
2021HLP1	Facility Information—Display Resource	INST_TAB
		FACTAB,RSMY
2021HLP2	Facility Information—Display Resource	INST_TAB
		FACTAB,RSMY

### 3.3.3 By Files

The following listing is ordered by the files used by MRPM. Each type of file corresponds to certain MRPM functions and programs.

<u>Files</u>	<u>Program</u>	<u>MRPM Function</u>
AMS_TAB	GOHI1040	Basic Information—AMS-RMF Factors
	GOHF1040	Basic Information—AMS-RMF Factors

F4C_TAB	MPDI1221	Basic Information—F4C Conversion Codes
	MPFI1221	Basic Information—F4C Conversion Codes
F4C_UCID	F4CF1000	Basic Information—Unit Cost by Age
	F4CI1000	Basic Information—Unit Cost by Age
INSTALLATION,FACILITY, INST_TAB,FACTAB	AGOH2082	Facility Information—Model Facility
	ARMY2082	Facility Information—Model Facility
	ARMY2083	Facility Information—Model Facility
	ATIM2082	Facility Information—Model Facility
	GOH2081	Facility Information—Model Facility
	LOAD1	Facility Information—Model Facility
	MPDI2082	Facility Information—Model Facility
INST_TAB,FACTAB,RSMY	DISK2063	Facility Information—Facility Report
	FORDISKI	Facility Information—Facility Report
	F4C12063	Facility Information—Facility Report
	F4C22063	Facility Information—Facility Report
	GOHF2011	Facility Information—Resource Calculation
	GOHF2062	Facility Information—Facility Report
	GOHF2063	Facility Information—Facility Report
	GOHF2064	Facility Information—Facility Report
	GOHI2011	Facility Information—Resource Calculation
	GOHI2062	Facility Information—Facility Report
	GOHI2063	Facility Information—Facility Report
	LSTA2062	Facility Information—Facility Report
	LSTF2062	Facility Information—Facility Report
	LSTF2063	Facility Information—Facility Report
	LSTI2062	Facility Information—Facility Report
	LSTS2062	Facility Information—Facility Report
	MPDI2000	Facility Information—Resource Calculation
	MPDI2010	Facility Information—Resource Calculation
	MPDI2011	Facility Information—Resource Calculation
	MPDI2040	Facility Information—Resource Calculation
	MPDI2061	Facility Information—Facility Report
	MPDI2062	Facility Information—Facility Report
	MPFI2000	Facility Information—Resource Calculation
	MPFI2011	Facility Information—Resource Calculation
	MPFI2012	Facility Information—Resource Calculation
	MPFI2051	Facility Information—General Information
	MPFI2061	Facility Information—Facility Report
	MPFI2062	Facility Information—Facility Report
	UCAG2050	Facility Information—Resource Calculation
	UNITCOST	Facility Information—Resource Calculation
	2021HLP1	Facility Information—Display Resource
	2021HLP2	Facility Information—Display Resource

INST_TAB,FACTAB	DISK2051	Facility Information—General Information
	DISI2021	Facility Information—Display Resource
	LIST2051	Facility Information—General Information
	MACO2082	Facility Information—Model Facility
	MPDI2051	Facility Information—General Information
	MGOH2082	Facility Information—Model Facility
	RAMSF4C	Facility Information—Facility Report
	RRSCREEN	Facility Information—Facility Report
INST_TAB	GOHF1061	Basic Information—Report Period
	LIST0003	Facility Information—General Information
	LIST0003	Facility Information—Facility Report
	LISTF003	Facility Information—Facility Report
	LIST0002	Facility Information—Review Database
	LISTF002	Facility Information—Review Database
	LISTF003	Facility Information—General Information
	LIST0007	Facility Information—Resource Calculation
	MPDI1061	Facility Information—Report Period
ORG_TAB	MPDI1011	Basic Information—Organization Chart
	MPFI1011	Basic Information—Organization Chart
REL_RMF	GOHF1041	Basic Information—AMS-RMF Factors
	GOHI1041	Basic Information—AMS-RMF Factors
REVARSMY	SCRA2063	Facility Information—Facility Report
REVFRSMY	SCRB2063	Facility Information—Facility Report
REVIRSMY	SCRI2063	Facility Information—Facility Report
REVSRSMY	SCRS2063	Facility Information—Facility Report
TRCOSTB	GOHI1221	Basic Information—Army Trade Cost Table
	GOHF1221	Basic Information—Army Trade Cost Table
UNIT_COST	IDCI1000	Basic Information—Unit Cost by Age
	IDCF1000	Basic Information—Unit Cost by Age
	MPDIUC4C	Basic Information—Unit Cost by Age
	MPFIUC4C	Basic Information—Unit Cost by Age
URR_INFO,URR_APPR1, URR_TAB1	LISTF009	Facility Information—Facility Report
	LIST0009	Facility Information—Facility Report
	URRHLP1	Facility Information—Facility Report
	URRF0000	Facility Information—Facility Report
	URRF1000	Facility Information—Facility Report
	URRF2000	Facility Information—Facility Report
	URRI0000	Facility Information—Facility Report

	URRI1000	Facility Information—Facility Report
	URRI2000	Facility Information—Facility Report
URR_INFO2,URR_TAB2	RANF2001	Facility Information—Facility Report
	RANG2001	Facility Information—Facility Report
	URRI2001	Facility Information—Facility Report

### 3.3.4 Subroutine Descriptions

The programs listing is alphabetical. For each program there is a corresponding program description.

<u>Program</u>	<u>Program Description</u>
AGOH2082	Screen for modelling method choices, edit default values
ARMF2082	Screen for ranges of MACOM ID,REPORTING INSTALLATION ID, INSTALLATION ID, F4C range, and Appropriation IDs.
ARMY2082	Screen driver for AGOH2082 and select the appropriate module for modelling
ARMY2083	Modelling facility information stored under TOTAL ARMY ID: *****
ATIM2082	Screen driver for screen ARMF2082 of different ranges criteria
BATMENU	Screen for the MRPM batch processing selection
DISI2021	Screen driver for displaying facility resources
DISK2051	Subroutine for downloading general facility information to PC disk
DISK2063	Subroutine for downloading AMS/F4C report to PC disk
FILESCR	Listing of files that can be downloaded to PC disk
F4CF1000	Screen for editing F4C range and Unit Cost ID
F4CI1000	Screen driver for editing F4C range and Unit Cost ID
F4C12063	Screen driver for generating 3-Digit F4C report under normal dollar
F4C22063	Screen driver for generating 3-Digit F4C per square feet report
GOHF1040	Screen for AMS range for the RMF database
GOHF1041	Screen for listing of REPORTING INSTALLATION and RMF factor under each AMS range

GOHF1061	Screen for reporting period of REPORTING INSTALLATION
GOHF1221	Screen for Army Trade Cost Table
GOHF2011	Screen for range of REPORTING INSTALLATIONs and appropriations for Resource Calculation
GOHF2062	Screen for range of REPORTING INSTALLATIONs and appropriation for report
GOHF2063	Screen for generating 3-Digit F4C report
GOHF2064	Screen for range of REPORTING INSTALLATIONs and appropriations for generating 3-Digit F4C report
GOHF2082	Screen for editing the default values for Modelling Facility
GOHI1040	Screen driver for AMS range for AMS-RMF factor table
GOHI1041	Screen driver for REPORTING INSTALLATION and RMF factor
GOHI1221	Screen driver for Army Trade Cost Table
GOHI2011	Screen driver for range of REPORTING INSTALLATIONs and appropriations for Resource Calculation
GOHI2062	Screen driver for range of REPORTING INSTALLATION and appropriation for generating AMS/F4C report
GOHI2063	Screen driver for range of REPORTING INSTALLATION and appropriation for generating 3-Digit F4C report
GOH2081	Screen for range of INSTALLATION, appropriations for Modelling
IDCI1000	Screen driver for editing Unit Cost Table
IDCF1000	Screen for editing Unit Cost Table
LISTF003	Screen for listing of REPORTING INSTALLATION ID in alphabetical order of reporting installation description
LISTF002	Screen for listing of REPORTING INSTALLATION ID in alphabetical order
LISTF009	Screen for listing of appropriations of a REPORTING INSTALLATION

LSTA2062	Generate AMS/F4C report under different area
LSTF2062	Generate AMS/F4C report with subtotals under each facility
LSTF2063	Generate AMS/F4C report with totals under each facility
LSTI2062	Generate AMS/F4C report under different REPORTING INSTALLATION
LSTS2062	Generate AMS/F4C report under different Subinstallation
LIST0002	Screen driver for listing of REPORTING INSTALLATION ID in alphabetical order
LIST0003	Screen driver for listing of REPORTING INSTALLATION description in alphabetical order
LIST0007	Screen driver for listing of REPORTING INSTALLATION ID for Resource Calculation
LIST0009	Screen driver for listing of appropriations for URR report
LIST2051	Printing the General Information to PC printer
MACO2082	Screen driver for screen MGOH2082 and selection of the appropriate module for modelling
MGOH2082	Screen for ranges of REPORTING INSTALLATION, appropriation, and modelling method for modelling facility information
MODEL000	Screen driver for selecting the modelling method: (1) Modelling by appropriation/F4C/Construction year (2) Modelling by F4C/Construction year
LOAD1	Module for modelling.
MODEL000	Screen for selection of modelling method: (1) By appropriation/F4C/construction year (2) By F4C/construction year
MPDIUC4C	Screen driver for Unit Cost Table selection
MPFIUC4C	Screen for Unit Cost Table selection
MPDI0004	Screen driver for MRPM batch processing
MPDI1011	Screen driver for listing of organization in the ARMY

MPDI1061	Screen driver for reporting period
MPDI1221	Screen driver for Army Trade Cost table
MPDI2000	Screen driver for selection of Total, Permanent, Temporary, and Europe databases for resource calculation
MPDI2010	Selection of appropriate Resource Calculation module according to method selected
MPDI2011	Screen driver for editing Resource Calculation parameters
MPDI2040	Module for RMF calculation
MPDI2051	Screen driver for General Information
MPDI2061	Screen driver for selection of different types of reports
MPDI2062	Screen driver for AMS/F4C facility report
MPDI2082	Screen driver for screen MGOH2082 and selection of appropriate module for modelling facility information at REPORTING INSTALLATION and REPORTING INSTALLATION range levels.
MPFI1011	Screen for Basic Information—General Information
MPFI1221	Screen for Army-Wide Trade Cost table
MPFI2000	Screen for selection of Total, Permanent, Temporary, and Europe databases for Resource Calculation
MPFI2011	Screen for selection of calculation method, time adjustment factor, RMF adjustment factor, and type of facilities to be processed
MPFI2012	Screen for selection of range of INSTALLATION and facility for calculation.
MPFI2051	Screen for individual facility General Information
MPFI2061	Screen for selection of Facility Report
MPFI2062	Screen for selection of parameter for AMS/F4C facility report



PRINT001	Screen driver for printing the AMS/F4C reports summarized under different REPORTING INSTALLATION, INSTALLATION, AREA, FACILITY (Subtotals), and FACILITY (Totals)
PRIN2061	Screen for printing the AMS/F4C report summarized under different REPORTING INSTALLATION, INSTALLATION, AREA, and FACILITY (Subtotal), and FACILITY (Totals)
RAMSF4C	Screen driver for reviewing AMS/F4C reports summarized under REPORTING INSTALLATION, INSTALLATION, AREA, and FACILITY (Subtotal), and FACILITY (Totals)
RANF2001	Screen for range of REPORTING INSTALLATION and appropriation for generating the URR comparison report
RANG2001	Screen driver for range of REPORTING INSTALLATION and appropriation for generating the URR comparison report
RRDISK	Screen for downloading AMS/F4C reports summarized under REPORTING INSTALLATION, INSTALLATION, AREA, FACILITY (Subtotals), and FACILITY (Totals) to PC disk
RRSCREEN	Screen driver for downloading AMS/F4C reports summarized under REPORTING INSTALLATION, INSTALLATION, AREA, FACILITY(Subtotals), and FACILITY (Totals) to PC disk
SCRA2063	Module for reviewing AMS/F4C report summarized under AREA
SCRB2063	Module for reviewing AMS/F4C report summarized under individual facility
SCRI2063	Module for reviewing AMS/F4C report summarized under REPORTING INSTALLATION
SCRS2063	Module for reviewing AMS/F4C report summarized under INSTALLATION
STARTERR	Module for starting the logging of MRPM errors
UCAG2050	Module for calculating Resource by Unit Cost (using method 2)
UNITCOST	Module for calculating Resource by Unit Cost (using method 5)
URRHLP1	Module for displaying the URR values on screen
URRF0000	Selection screen for editing URR parameters or generating URR report

URRF1000	Screen for editing URR parameters
URRF2000	Screen for generating URR report
URRI0000	Screen driver for selection of editing URR parameters or generating URR report
URRI1000	Screen driver for editing URR parameters
URRI2000	Screen driver for generating URR report
URRI2001	Module for generating URR report
2021HLP1	Module for clearing the screen value for displaying Resource table
2021HLP2	Module for assigning the screen value for displaying Resource table

#### 4. STANDARD SUBROUTINES

The listing of programs is alphabetical. For each program there is a corresponding program description.

<u>Program</u>	<u>Program Description</u>
LISTF003	Screen for listing REPORTING INSTALLATION IDs in alphabetical order of reporting installation description
LISTF002	Screen for listing REPORTING INSTALLATION IDs in alphabetical order
LIST0002	Screen driver for listing REPORTING INSTALLATION ID in alphabetical order
LIST0003	Screen driver for listing REPORTING INSTALLATION descriptions in alphabetical order
LIST0007	Screen driver for listing REPORTING INSTALLATION IDs for resource calculation
STARTERR	Module for starting the logging of MRPM errors
RESTORED	Module for controlling the MRPM environment for different user priority levels, such as TOTAL ARMY, MACOM RANGE, SPECIFIC MACOM, REPORTING INSTALLATION RANGE, and REPORTING INSTALLATION levels
LOAD1	Module for modelling use for Total Army, MACOM, and Reporting Installation Level

## 5. SCHEMAS

The MRPM schema is divided into two major divisions:

- (1) MRPMTADB, MRPMEXDB, MRPMINDB schemas
- (2) HQA, HQALIB, CONPROF, FUNDPFROF schemas.

Schemas (1) Are the MRPM schemas partially developed by programmers at PRC between 1984 to 1986 and by USACERL between 1987 and 1989; schemas (2) Are the original schemas of the HQ-IFS Assets Database.

The following section describes each individual schema separately:

### 5.1 MRPMTADB Schema

This schema was developed by programmers at Professional Research Corporation (PRC); however, the original schema was longer and many of the masters are not currently used. The following schema corresponds to what is now used currently in the MRPM system, and includes the unused masters in case they might be used in future revisions.

```
=====SCHEMA=====
MASTER ORG_TABLE INSERT=KEYED(ORG_INST_ID)
DOC=' (2) INSTALLATION/MACOM RELATIONSHIP';
ITEM ORG_INST_ID AS A5 HEADING='INSTALLATION:ID';
ITEM ORG_MAC_ID AS A2 HEADING='MACOM:ID';
ITEM ORG_REL AS A5 HEADING='RELATION:CODE';
ITEM ORG_SUBI AS A2 HEADING='SUB:INST';

MASTER USERSTAB INSERT=KEYED (S_USER)
DOC=' (19) SYSTEM USERS AND AUTHORIZED ACCESS';
ITEM S_USER AS A8 HEADING='USER:ID';
ITEM S_USR_NM AS A30 HEADING='USER:NAME';
ITEM S_USR_MOD AS A1 LIMITS ('1','2','3',NOTNAV) HEADING='USR:MOD:ACC';
ITEM S_USR_MACOM AS A2 HEADING='USER:MACOM';
ITEM S_INST AS A5 HEADING='USER:INST';
ITEM S_SYSTEM AS A1 HEADING='USER:SYS:AUTH';

MASTER F4C_TAB INSERT=KEYED(F4C_CODE)
DOC=' (16) F4C CODES, RANGES AND GROUPS';
ITEM F4C_CODE AS 0999999 HEADING='F4C:CODE';
ITEM F4C_GROUP AS A2 HEADING='F4C:GROUP';
ITEM F4C_AMS AS A10 HEADING='AMS:CONVERSION:CODE';
ITEM F4C_PRED_ID AS A2 HEADING='F4C:PREDICTION:ID';
ITEM F4C_COMP_ID AS A2 HEADING='F4C:COMPUTATION:ID';
PERSPECT;
=====
```

## Description of MRPMTADB Schema

### MASTER ORG TABLE

MASTER ORG\_TABLE contains the organization information. This table is keyed on the Installation ID. Each Installation belongs to a specific Reporting Installation and MACOM. Subinstallation is not used.

ORG\_INST\_ID is the Installation ID. ORG\_MAC\_ID is the MACOM ID. ORG\_REL is the Reporting Installation ID. ORG\_SUBI is the Subinstallation ID.

### MASTER F4C TAB

MASTER F4C\_TAB contains the F4C to AMS conversion information. This table is keyed on the F4C code. Each different F4C is matched to an AMS code. F4C\_GROUP, F4C\_PRED\_ID, F4C\_COMP\_ID are not currently used.

F4C\_CODE is the F4C code. F4C\_GROUP is used in grouping the F4C, F4C\_AMS is the AMS code.

## 5.2 MRPMEXDB Schema

This schema contains all the currently developed masters for the MRPM system. These masters were developed by USACERL. MRPMEXDB schema is separated from MRPMTADB to distinguish between the new masters added by USACERL and the original masters developed by PRC. In fact both of these schemas can be combined by eliminating the unused masters in the MRPMTADB schema.

This schema contains: the necessary condition multiplier, unit-cost data and F4C range; the RMF data for nonbuilding; the AMS description for URR report; the invalid F4C list for "not to be modelled"; user information; URR table for generating the URR report; and miscellaneous data.

```
=====SCHEMA=====
MASTER TRCOSTB FILENAME = 'MRPMEXDB' FILETYPE = 'TRCOSTB'
  INSERT= KEYED(RELCODE,A);
  ITEM RELCODE AS A5 HEADING='REL:CODE';
  ITEM INSNAME AS A30 HEADING='INSTALLATION:NAME';
  ITEM MATLC AS 99.99 INT=P15.2
    HEADING='MATERIAL:LOCATION:ADJUSTMENT';
  ITEM ECARP AS 99.99 INT=P15.2
    HEADING='CARPENTER:SHOP:EFFECTIVE:RATE';
  ITEM MCARP AS 99.99 INT=P15.2
    HEADING='CARPENTER:SHOP:MAINTENANCE:TRUCK RATE';

MASTER AMS_TAB FILENAME = 'MRPMEXDB' FILETYPE='GAMS'
  INSERT = KEYED(L_AMS,A,H_AMS,A);
```

```

ITEM L_AMS AS A10 HEADING = 'LOW:AMS:CODE';
ITEM H_AMS AS A10 HEADING='HIGH:AMS:CODE';
SEGMENT REL_RMF PARENT=AMS_TAB FILETYPE='RELRMF'
    INSERT = KEYED(REL_CODE,A);
ITEM REL_CODE AS A5 HEADING='REL:CODE';
ITEM RRMF AS 999999.9999 INT=P15.4;

MASTER UNIT_COST FILENAME='MRPMEXDB' FILETYPE='AVGCPSF'
    INSERT = KEYED(UC_ID,A);
ITEM UC_ID AS A2 HEADING = 'UNIT:COST:ID';
ITEM UCSPM AS 9.99 HEADING='UCOST:UCSPM';
ITEM UC_ARM AS 9999.99 HEADING='ARM';
ITEM UC_AGE(80) AS 999.99 HEADING='UCOST:AGE';

MASTER F4C_UCID FILENAME = 'MRPMEXDB' FILETYPE='F4CUCID'
    INSERT = KEYED(L_F4C,A,H_F4C,A);
ITEM L_F4C AS 0999999 HEADING = 'LOW:F4C';
ITEM H_F4C AS 0999999 HEADING = 'HIGH:F4C';
ITEM UNIT_C_ID AS A2 HEADING = 'USA:TOT';
ITEM ID2 AS A2 HEADING = 'USA:PERM';
ITEM ID3 AS A2 HEADING = 'USA:TEMP';
ITEM ID4 AS A2 HEADING = 'GER:ID';

MASTER MISCELL FILENAME = 'MRPMEXDB' FILETYPE='MISCELL'
    INSERT=KEYED(NUMBER,A);
ITEM NUMBER AS 99999999 HEADING = 'NUMBER';
ITEM COST_TIME_ADJ AS 99.999 HEADING = 'COST:TIME:ADJ';
ITEM MRMF_ADJ AS 99.999 HEADING = 'RMF:ADJ';
ITEM CUR_USER AS A8 HEADING='CURRENT:USER';

MASTER REVIRSMY FILENAME = 'MRPMEXDB' FILETYPE='REVRSMY'
    DISK=B INSERT = KEYED(R_INSID,A);
ITEM R_INSID AS A5 HEADING = 'REP. INST.';
ITEM R_FGNUM AS 9999999 HEADING = 'FGNUM';
ITEM R_GRSQFT AS 999999999999 HEADING = 'GRSQFT';
ITEM R_TOTAL AS 9999999999999999 INT=R8 HEADING = 'TOTAL';
ITEM R_RMF(0) AS 999999999999 HEADING = 'RMF';
ITEM R_ARM AS 999999999999 INT=R8 HEADING = 'ARM';
ITEM R_YR(0) AS 9999 HEADING = 'YEAR';
ITEM R_MRT(0) AS 999999999999 INT=R8 HEADING = 'MRT';
ITEM R_RSMY(0) AS 999999999999 INT=R8 HEADING='RSMY';

```

```

MASTER REVSRSMY  FILENAME = 'MRPMEXDB' FILETYPE='INSRSMY'
                   DISK=B INSERT = KEYED(IN_INSID,A,IN_SUBI,A);
ITEM IN_INSID    AS A5 HEADING = 'REP. INST.';
ITEM IN_SUBI     AS A5 HEADING = 'SUBI. ';
ITEM IN_FGNUM    AS 9999999 HEADING = 'FGNUM';
ITEM IN_GRSQFT   AS 999999999999999999 HEADING = 'GRSQFT';
ITEM IN_TOTAL    AS 999999999999999999 INT=R8 HEADING = 'TOTAL';
ITEM IN_RMF(0)   AS 999999999999999999 HEADING='RMF';
ITEM IN_ARM      AS 999999999999999999 INT=R8 HEADING = 'ARM';
ITEM IN_YR(0)    AS 9999 HEADING = 'YEAR';
ITEM IN_MRT(0)   AS 999999999999999999 INT=R8 HEADING = 'MRT';
ITEM IN_RSMY(0)  AS 999999999999999999 INT=R8 HEADING='RSMY';

```

```

MASTER REVARSMY  FILENAME = 'MRPMEXDB' FILETYPE='ARERSMY'
                   DISK=B INSERT = KEYED(A_INSID,A,A_SUBI,A,A_AREA,A);
ITEM A_INSID     AS A5 HEADING = 'REP. INST.';
ITEM A_SUBI      AS A5 HEADING = 'SUBI. ';
ITEM A_AREA      AS A5 HEADING = 'AREA ';
ITEM A_FGNUM     AS 9999999 HEADING = 'FGNUM';
ITEM A_GRSQFT    AS 999999999999999999 HEADING = 'GRSQFT';
ITEM A_TOTAL     AS 999999999999999999 INT=R8 HEADING = 'TOTAL';
ITEM A_RMF(0)    AS 999999999999999999 HEADING='RMF';
ITEM A_ARM       AS 999999999999999999 INT=R8 HEADING = 'ARM';
ITEM A_YR(0)     AS 9999 HEADING = 'YEAR';
ITEM A_MRT(0)    AS 999999999999999999 INT=R8 HEADING = 'MRT';
ITEM A_RSMY(0)   AS 999999999999999999 INT=R8 HEADING='RSMY';

```

```

MASTER REVFRSMY  FILENAME = 'MRPMEXDB' FILETYPE='FACRSMY'
                   DISK=B INSERT = KEYED(FAC_INSID,A,FAC_FACID,A);
ITEM FAC_INSID   AS A5 HEADING = 'REP. INST.';
ITEM FAC_FACID   AS A9 HEADING = 'FACID ';
ITEM FAC_F4C     AS A15 HEADING = 'F4C';
ITEM FAC_FGNUM    AS 9999999 HEADING = 'FGNUM';
ITEM FAC_GRSQFT   AS 999999999999999999 HEADING = 'GRSQFT';
ITEM FAC_TOTAL   AS 999999999999999999 INT=R8 HEADING = 'TOTAL';
ITEM FAC_RMF(0)  AS 999999999999999999 HEADING = 'RMF';
ITEM FAC_ARM     AS 999999999999999999 INT=R8 HEADING = 'ARM';
ITEM FAC_YR(0)   AS 9999 HEADING = 'YEAR';
ITEM FAC_MRT(0)  AS 999999999999999999 INT=R8 HEADING = 'MRT';
ITEM FAC_RSMY(0) AS 999999999999999999 INT=R8 HEADING='RSMY';

```

```

MASTER USERINFO FILENAME = 'MRPMEXDB' FILETYPE='USRPWD'
                   INSERT=KEYED(USRLOGIN,A,NOTUNIQUE,USRPWD,A,UNIQUE);
ITEM USRLOGIN AS A8 HEADING = 'USER:LOGIN';
ITEM USRPWD  AS A8 HEADING = 'USER:PWD';
ITEM USRPRI  AS A1 HEADING = 'PRIORITY';

```

```

MASTER URR_TAB FILENAME='MRPMEXDB' FILETYPE='URR'
  INSERT=KEYED(URR_AMS,A);
  ITEM URR_AMS AS A10 HEADING='URR_AMS';
  ITEM AMS_NAME AS A30 HEADING='AMS_NAME';
  ITEM URR_YEAR(10) AS 9999 HEADING='URR_YEAR';
  ITEM URR_SF(10) AS 9999999999 HEADING='URR_SF';
  ITEM URR_KD(10) AS 9999999999 HEADING='URR_KD';
  ITEM IFS_SF(10) AS 9999999999 HEADING='URR_SF';
  ITEM MRPM_TOTAL(10) AS 9999999999 HEADING='MRPM_TOTAL';

```

```

MASTER MACOM_INFO FILENAME = 'MRPMEXDB' FILETYPE='MACINFO'
  INSERT=KEYED(INST_ID,A);
  ITEM INST_ID AS A5 HEADING = 'INST:ID';
  ITEM INST_DES AS A30 HEADING = 'INST:NAME';
  ITEM M AS A2 HEADING = 'MACOM';

```

```

MASTER AMSTAB FILENAME = 'MRPMEXDB' FILETYPE='AMSTAB'
  INSERT=KEYED(AMS_CODE,A);
  ITEM AMS_CODE AS A10;
  ITEM AMS_DESC AS A30;
PERSPECT;
=====

```

#### Description of MRPMEXDB Schema

##### MASTER TRCOSTB

MASTER TRCOSTB contains the Army-Wide Cost Adjustment Factors. Each Reporting Installation listed in this table is assigned a Material Location Adjustment Factor, a Shop Effective Rate, and a Shop Maintenance Truck Rate. This table is keyed on the Reporting Installation ID.

RELCODE is the Reporting Installation ID; INSNAMA is the name of the Reporting Installation ID. MATLC is the Material Location Adjustment Factor; ECARP is the Carpenter Shop Effective Rate; MCARP is the Carpenter Shop Maintenance Truck Rate. ECARP and MCARP are not currently used.

##### MASTER AMS\_TAB

MASTER AMS\_TAB contains the low and high AMS range for the RMF table. It is the parent of the SEGMENT REL\_RMF. This table is keyed on the low and high AMS code. L\_AMS is the low AMS code; H\_AMS is the high AMS code.



### SEGMENT REL RMF

SEGMENT REL\_RMFM contains the RMF (Recurring Maintenance Factors) database, which is keyed on the Reporting Installation ID. For each Reporting Installation ID, an RMF factor is assigned. REL\_CODE is the Reporting Installation ID; RRMF is the RMF factor assigned to the Reporting Installation.

### MASTER UNIT COST

MASTER UNIT\_COST contains the unit cost factor for resource calculation. It is keyed on a unit cost ID. For each unit cost ID there is a special condition multiplier, ARM (Annual Recurring Maintenance) factor, and a 80-year unit cost factor.

UC\_ID is the unit cost ID; UCSPM is the special condition multiplier; UC\_ARM is the ARM factor; UC\_AGE(80) is an array of unit cost for 80 years.

### MASTER F4C\_UCID

MASTER F4C\_UCID contains the F4C range that corresponds to four different unit cost IDs. These four different unit cost IDs are used in the Resource Calculation for referring to the UNIT\_COST table. Each unit cost ID refers to different unit cost database used for Resource Calculation.

L\_F4C is the low F4C code; H\_F4C is the high F4C code; UNIT\_C\_ID is the unit cost ID for the Total United States Database; ID2 is the unit cost ID for the Permanent United States Database; ID3 is the unit cost ID for the Temporary United States Database; ID4 is the unit cost ID for the Europe Database.

### MASTER MISCELL

MASTER MISCELL contains the miscellaneous values that the MRPM system saves as permanent items when the user signs off the system. These values are used by the calculation program, and also as the locking mechanism within a multiuser environment. It is keyed on NUMBER.

NUMBER is just a numeric value for ordering the different block of miscellaneous values. COST\_TIME\_ADJ is the cost time adjustment factor used in the Resource Calculation; MRMF\_ADJ is the RMF adjustment factor used in the Resource Calculation; CUR\_USER is the currently user ID logged onto the MRPM system.

### MASTER REVIRSMY

MASTER REVIRSMY contains the temporary information used in reviewing the report at the Reporting Installation Level. This information is stored on the virtual disk. It will be erased when the user signs off the MRPM system. This table is keyed on the Reporting Installation ID. For each Reporting Installation ID, there is report information.

R\_INSID is the Reporting Installation ID; R\_FGNUM is the number of facilities in the Reporting Installation ID; R\_GRSQFT is the total square feet of the facilities under the Reporting Installation ID; R\_TOTAL is the total dollars for the facilities under the Reporting Installation ID; R\_RMF(0) is an array of RMF resource needed for the Reporting Installation; R\_ARM is the ARM resource needed for the Reporting Installation; R\_YR(0) is the range of 10 years; R\_MRT(0) is an array of MRT resource needed for the Reporting Installation ID; R\_RSMY (0) is an array of total resources for each year.

#### MASTER REVSRSMY

MASTER REVSRSMY contains the temporary information used in reviewing the report at the Subinstallation Level. This information is stored on the virtual disk. It will be erased when the user signs off the MRPM system. This table is keyed on Reporting Installation and Subinstallation IDs. For each Reporting Installation ID and Subinstallation, there is report information.

IN\_INSID is the Reporting Installation ID; IN\_SUBI is the subinstallation ID; IN\_FGNUM is the number of facilities in the Subinstallation ID; IN\_GRSQFT is the total square feet of the facilities under the Subinstallation ID; IN\_TOTAL is the total dollars for the facilities under the Subinstallation ID; IN\_RMF(0) is an array of RMF resource needed for the Subinstallation; IN\_ARM is the ARM resource needed for the Subinstallation; IN\_YR(0) is the range of 10 years; IN\_MRT(0) is an array of MRT resource needed for the Subinstallation ID; IN\_RSMY (0) is an array of total resource for each year.

#### MASTER REVARSMY

MASTER REVARSMY contains the temporary information used in reviewing the report at the AREA Level. This information is stored on the virtual disk. It will be erased when the user signs off the MRPM system. This table is keyed on Reporting Installation, Subinstallation ID, and Area ID. For each Reporting Installation ID, Subinstallation ID, and Area ID there is report information.

A\_INSID is the Reporting Installation ID; A\_SUBI is the subinstallation ID; A\_AREA is the Area ID. A\_FGNUM is the number of facilities in the Area ID; A\_GRSQFT is the total square feet of the facilities under the Area ID; A\_TOTAL is the total dollars for the facilities under the Area ID; A\_RMF(0) is an array of RMF resource needed for the Area; A\_ARM is the ARM resource needed for the Area; A\_YR(0) is the range of 10 years; A\_MRT(0) is an array of MRT resources needed for the Area ID; A\_RSMY (0) is an array of total resources for each year.

#### MASTER REVFRSMY

MASTER REVFRSMY contains the temporary information used in reviewing the report at the FACILITY Level. This information is stored on the virtual disk. It will be erased when the user signs off the MRPM system. This table is keyed on Reporting Installation and Facility ID. For each Reporting Installation ID and Facility ID, there is report information.

FAC\_INSID is the Reporting Installation ID; FAC\_FACID is the Facility ID; FAC\_FGNUM is the number of facilities in the Facility ID; FAC\_GRSQFT is the total square feet of the facilities; FAC\_TOTAL is the total dollars for the facilities; FAC\_RMF(0) is an array of RMF resource needed for the facility; FAC\_ARM is the ARM resource needed for the facility; FAC\_YR(0) is the range of 10 years;

FAC\_MRT(0) is an array of MRT resource needed for the facility; FAC\_RSMY (0) is an array of total resources for each year.

#### MASTER USERINFO

MASTER USERINFO contains the users' information, which is keyed on the user's MRPM login. Each user receives a MRPM login and password, which must be keyed in to enter the system.

USRLOGIN is the user's MRPM login; USRPWD is the user's MRPM password; USRPI is the user's writing or reading priority.

#### MASTER URR\_TAB

MASTER URR\_TAB contains the URR information generated. It is keyed on URR AMS code. For each URR AMS code there are URR and MRPM values.

URR\_AMS is the URR AMS code; AMS\_NAME is the description of AMS code; URR\_YEAR(10) is an array of URR years; URR\_SF(10) is an array of URR square feet; URR\_KD(10) is an array of URR dollars; IFS\_SF(10) is an array of MRPM square feet; MRPM\_TOTAL(10) is an array of MRPM total dollars.

#### MASTER MACOM INFO

MASTER MACOM\_INFO contains the Reporting Installation ID, its description, and the MACOM it belongs to; This is a supplemental table to the RELATIONS table. This table contains the Reporting Installation ID for Total Army and MACOM, such as \*\*\*\*\*, \*\*\*??. It is keyed on the Reporting Installation ID.

INST\_ID is the Reporting Installation ID; INST\_DES is the description of the Reporting Installation ID; M is the MACOM to which the Reporting Installation belongs.

#### MASTER AMS\_TAB

MASTER AMS\_TAB contains the AMS Code and Description used in the URR report. It is keyed on the AMS\_CODE. AMS\_DESC is the AMS description.

### 5.3 MRPMINDB Schema

This schema was developed by PRC, and later modified by USACERL to fulfil new users' demands for new functions. It contains the main MRPM facility and resources database.

The main MRPM facility database is organized under the master INST\_TAB and its children segment FACTAB. The INST\_TAB master contains the Reporting Installations information modelled from the HQ-IFS Assets Database. The FACTAB contains the facility information under a specific Reporting Installation. The Reporting Installation is the parent of a listing of facility information.



## Description of MRPMINDB Schema

### MASTER INST\_TAB

MASTER INST\_TAB contains the Reporting Installation Information of the MRPM database. MRPM database is modelled from the HQ-IFS Assets Database. The INST\_TAB is keyed on the Reporting Installation ID. Information in this table is used in the General Information Screens, Resource Calculation, Display Resource screens, and Reports.

INSID is the Reporting Installation ID. INS\_BG\_RPYR is the beginning reporting year; INS\_EN\_RPYR is the ending reporting year; IN\_CAL is the calculation method; CALDATETIME is the calculation time and date.

### SEGMENT FACTAB

SEGMENT FACTAB is the child of the MASTER INST\_TAB and contains the information of the facilities that belong to a specific Reporting Installation. The facility information is modelled from the HQ-IFS Assets Database. The FACTAB is keyed on three fields in the following order: Subinstallation, Area, and Facility ID. Facility information is used in the General Information Screens, Resource Calculation, Display Resource screens, and Reports.

FAC\_ID is the facility ID; F\_SUBI is the Subinstallation ID; F\_AREA is the Area ID; F\_F4C is the F4C code for the facility; F\_FGNUM is the number of facilities within a facility group; F\_CHNG is the date the facility information was modified; F\_LCAL is the date the facility was last calculated; F\_MODMTH is the calculation method used in the resource calculation; F\_GRSQFT is the total area for the facility group; F\_CYR is the construction year; F\_SDISP is the year the facility is to be disposed.

RSYR(10) is the range of years the report is generated; RSTC\_ARM is the ARM values for the facility; RSTC(10) is the total maintenance resource for the facility; RSDC is the date of the maintenance resource calculated; RSTC\_MRT(10) is the MRT values for the facility; RSMY\_ARM(10) is the ARM values used in the facility reports; RSTC\_RMF(10) is the RMF values for the facility.

## 5.4 HQA Schema

HQA schema was not developed by USACERL. Detailed description of the HQA schema should be referred to Engineering Housing Support Center (EHSC), Fort Belvoir, VA.

=====SCHEMA=====

SCHEMA;

!BADD HQALIB;!

MASTER INSTALLATION TYPE=BTREE FILENAME='HQA' FILETYPE='INSTALL' DISK=K  
INSERT=KEYED(INSNO,A);

ITEM INSNO AS A5 HEADING='INST:NUM';

ITEM REL AS A5 HEADING='REL:CODE';

```

ITEM  NAME AS A30 HEADING='INSTALLATION NAME';
ITEM  MAC AS A2 HEADING='MACOM:CODE';
ITEM  MSC AS A2 HEADING='MSC:CODE';
ITEM  AGENCY AS A2 HEADING='USING:AGENCY';
ITEM  YEARACQ AS 9999 INT=I2 HEADING='YEAR:ACQ';
ITEM  ICOSTGOV AS 999,999,999 INT=I4 HEADING='INSTALLATION:COST TO GOV';
ITEM  IACRES AS 99,999,999 INT=I4 HEADING='INSTALLATION:AREA (ACRES)';
ITEM  IBLDGS AS 999,999 INT=I4 HEADING='INSTALLATION:BLDG COUNT';
ITEM  SYSDATE AS 999999 INT=I4 HEADING='UPDATE:DATE';
ITEM  DISTRICT AS A2 HEADING='CONG:DIST';
ITEM  DIRECTION AS A2 HEADING='CTY:DIR';
ITEM  DISTANCE AS 999 INT=I2 HEADING='CTY:DIS';
ITEM  CITY AS A15 HEADING='CITY NAME';
ITEM  COUNTY AS A15 HEADING='COUNTY/POL SUBDIV';
ITEM  ARLOC AS A5 HEADING='ARLOC';
ITEM  RUCODE AS A1 HEADING='R:U';
ITEM  ITYPE AS A1 HEADING='INST:TYPE';
ITEM  SKO AS A1 HEADING='SKO:CODE';
ITEM  ALTFUNCTION AS A1 HEADING='FUNC:CODE2';
ITEM  FUNCTION AS A1 HEADING='FUNC:CODE';
ITEM  FUNCTIONDESC AS A25 HEADING='FUNCTION DESCRIPTION';
ITEM  OPERATOR AS A20 HEADING='OPERATOR NAME';
ITEM  UTMCOORD AS A8;
ITEM  MAPSHEET AS A8;
ITEM  RFCODE AS A1 HEADING='R:F';
DEFINE P_NAME AS EXTRACT'PARENT FROM RELATIONS KEY REL' HEADING='PARENT
NAME';
DEFINE MACOM AS EXTRACT'TMACOM_NAME FROM MACOMTAB KEY MAC'
HEADING='MACOM NAME';
DEFINE MAC_ABBR AS EXTRACT'TMACOM_ABBR FROM MACOMTAB KEY MAC'
HEADING='MACOM';
DEFINE STATE_CODE AS A2 HEADING='STATE CODE' EXPR=INSNO;
DEFINE STATE AS EXTRACT'SNAME FROM STATES KEY STATE_CODE'
HEADING='STATE/COUNTRY';
DEFINE STATE_ABBR AS EXTRACT'SABBR FROM STATES KEY STATE_CODE'
HEADING='STATE';
!-----ADDED, MARCH 3, 1989, BT. GOH-----!
DEFINE IFS_MAC AS EXTRACT'PARENT_MAC FROM RELATIONS USING REL';
DEFINE ACC_CAPP AS EXTRACT'CAPP_ACC FROM CAPPRO USING INSNO';
!-----ADDED, MARCH 3, 1989, BT. GOH-----!
SEGMENT FACILITY PARENT=INSTALLATION FILETYPE='FACILITY' DISK=K
INSERT=KEYED(FACNO,A,SUFFIX,A) BIGBLK;
ITEM  FACNO AS A5 HEADING='FACILITY:NUMBER';
ITEM  SUFFIX AS A3 HEADING='SUF';
ITEM  TYPE AS A1 HEADING='T:C';
ITEM  OWN AS A1 HEADING='O:C';

```

ITEM CONDITION AS A1 HEADING='C:C';  
 ITEM BLDG AS A1 HEADING='B:C';  
 ITEM DISPOSAL AS A1 HEADING='DISP:CODE';  
 ITEM FIRE AS A1 HEADING='F:R';  
 ITEM ACTIVATION AS A1 HEADING='A:S';  
 ITEM DESIGN AS 9999999 INT=I4 HEADING='DESIGN:CATCODE';  
 ITEM USE AS 9999999 INT=I4 HEADING='CURRENT:USE';  
 ITEM MOB\_USE AS 9999999 INT=I4 HEADING='MOBILIZATION:USE';  
 ITEM RECOMMENDED AS 9999999 INT=I4 HEADING='RECOMMENDED:USE';  
 ITEM GROSSAREA AS 99,999,999 INT=I4 HEADING='GROSS AREA';  
 ITEM NETAREA AS 99,999,999 INT=I4 HEADING='NET AREA';  
 ITEM VACANT AS 99,999,999 INT=I4 HEADING='VACANT AREA';  
 ITEM OUTGRANT AS 99,999,999 INT=I4 HEADING='OUTGRANT AREA';  
 ITEM CAPACITY AS 99,999,999 INT=I4 HEADING='TOTAL CAPACITY';  
 ITEM COSTGOV AS 99,999,999 INT=I4 HEADING='COST TO:GOV';  
 ITEM IMPCOST AS 99,999,999 INT=I4 HEADING='IMPROVEMENT:COST';  
 ITEM ESTVAL AS 99,999,999 INT=I4 HEADING='ESTIMATED VALUE';  
 ITEM RENTPAID AS 99,999,999 INT=I4 HEADING='RENT PAID';  
 ITEM RENTRECD AS 99,999,999 INT=I4 HEADING='RENT RECEIVED';  
 ITEM DISP\_SUB AS 9999999 INT=I4 HEADING='DISPOSAL:SUBMITTED';  
 ITEM DISP\_APP AS 9999999 INT=I4 HEADING='DISPOSAL:APPROVED';  
 ITEM DISP\_ST AS 9999999 INT=I4 HEADING='DISPOSAL:STARTED';  
 ITEM YEAR AS 9999 INT=I2 HEADING='YEAR:BLT';  
 ITEM LIFE AS 9999 INT=I2 HEADING='EST ECON:LIFE';  
 ITEM UTILITIES AS A8;  
 ITEM FLOORS AS A2 HEADING='NO:FLR';  
 ITEM FOUND\_TYPE AS A1 HEADING='FOUND:TYPE';  
 ITEM FOUND\_MAT AS A1 HEADING='FOUND:MAT';  
 ITEM STRUCT1 AS A1 HEADING='STRUCT:PRIM';  
 ITEM STRUCT2 AS A1 HEADING='STRUCT:SEC';  
 ITEM FLOOR\_SURF AS A1 HEADING='FLOOR:SURFACE';  
 ITEM FLOOR\_SUBSURF AS A1 HEADING='FLOOR:SUBSURF';  
 ITEM WALL\_EXT AS A1 HEADING='WALL:EXT';  
 ITEM WALL\_INT AS A1 HEADING='WALL:INT';  
 ITEM ROOF\_SUP AS A1 HEADING='ROOF:SUPPORT';  
 ITEM ROOF\_DECK AS A1 HEADING='ROOF:DECK';  
 ITEM ROOF\_SUR AS A1 HEADING='ROOF:SURF';  
 ITEM COMPLEX AS A2 HEADING='COMPLEX:CODE';  
 ITEM MCALINE AS A6 HEADING='MCA:LINE';  
 ITEM EEL\_CODE AS A1 HEADING='EEL:CODE';  
 ITEM FUNCTIONAL\_GRP AS A10 HEADING 'FUNC:GROUP';  
 ITEM USER\_CODE AS A2 HEADING 'USER:CODE';  
 ITEM FLOOR\_HEATED AS 99,999,999 HEADING 'HEATED:FLOORS';  
 DEFINE UM1 AS EXTRACT'TUM1 FROM CATTAB7 KEY DESIGN';  
 DEFINE UM2 AS EXTRACT'TUM2 FROM CATTAB7 KEY DESIGN';

```

DEFINE DESIGN_D AS EXTRACT'CATEGORYDESC7 FROM CATTAB7 KEY DESIGN'
HEADING='DESIGN DESCRIPTION';
DEFINE DESIGN5 AS 99999 INT=I4 HEADING='DESIGN:CATCODE' EXPR=INT(DESIGN/100);
DEFINE DESIGN3 AS 999 INT=I4 HEADING='DESIGN:CATCODE' EXPR=INT(DESIGN/10000);
DEFINE DESIGN3_D AS EXTRACT'CATEGORYDESC3 FROM CATTAB3 KEY DESIGN3'
HEADING='DESIGN DESCRIPTION';
DEFINE USE_D AS EXTRACT'CATEGORYDESC7 FROM CATTAB7 KEY USE'
HEADING='CURRENT USE:DESCRIPTION';
DEFINE USE5 AS 99999 INT=I4 HEADING='CURRENT:USE' EXPR=INT(USE/100);
DEFINE USE3 AS 999 INT=I4 HEADING='CURRENT:USE' EXPR=INT(USE/10000);
DEFINE USE3_D AS EXTRACT'CATEGORYDESC3 FROM CATTAB3 KEY USE3'
HEADING='CURRENT USE:DESCRIPTION';
!-----ADDED MARCH 16, 1989-----!
DEFINE PT AS A1 EXPR=IF TYPE AMONG ('S','P') THEN 'P'
ELSE 'T';
SEGMENT UTILITY PARENT=INSTALLATION FILETYPE='UTILITY' DISK=K
INSERT=KEYED(UTYPE,A,UFACNO,A,USUFFIX,A) BIGBLK;
ITEM UFACNO AS A5 HEADING='FACNO';
ITEM USUFFIX AS A3 HEADING='SUF';
ITEM UCONDITION AS A1 HEADING='C:C';
ITEM UCOMPLEX AS A2 HEADING='COM:PLEX';
ITEM UCATCODE AS 9999999 INT=I4 HEADING='CATEGORY:CODE';
ITEM UAREA AS 99,999,999 INT=I4 HEADING='TOTAL AREA';
ITEM UCAPACITY AS 99,999,999 INT=I4 HEADING='TOTAL CAPACITY';
ITEM UHEATED AS 99,999,999 INT=I4 HEADING='HEATED:SPACE';
ITEM UUSER_CODE AS A2 HEADING 'USER:CODE';
ITEM UTYPE AS A1 HEADING='T:C';
END;
=====

```

## 5.5 HQALIB Schema

HQALIB schema was not developed by USACERL. Detailed description of the schema should be referred to Engineering Housing Support Center.

```

=====SCHEMA=====
SCHEMA;
    !*** HQIFS ASSETS LOOKUP TABLES ***!

MASTER RELATIONS INSERT=KEYED(PARENT_REL);
ITEM PARENT_REL A5;
ITEM PARENT A30 HEADING 'PARENT NAME';
ITEM PARENT_MAC A2 HEADING 'PARENT:MACOM';
ITEM PARENT_COST_LF 99.999 HEADING 'PARENT:LOCATION:COST FACTOR';

```



DEFINE PARENT\_MAC\_ABBR AS EXTRACT'TMACOM\_ABBR FROM MACOMTAB KEY  
PARENT\_MAC';

MASTER MACOMTAB INSERT=KEYED(TMACOM);  
ITEM TMACOM A2 HEADING 'MAC:CODE';  
ITEM TMACOM\_ABBR A5 HEADING 'MACOM:ABBR';  
ITEM TMACOM\_NAME A30 HEADING 'MACOM NAME';  
ITEM TMACOM\_ASGN A2 HEADING 'SAM:ASSIGN';

MASTER INVESTTAB INSERT=KEYED( TINVNO);  
ITEM TINVNO A2 HEADING 'INV:NO';  
ITEM TINVDESC A15 HEADING 'INVESTMENT CATEGORY';

MASTER CATTAB7 INSERT=KEYED(CAT7);  
ITEM CAT7 9999999 HEADING 'CATEGORY:CODE';  
ITEM CATEGORYDESC7 A15 HEADING 'CATEGORY DESCR';  
ITEM TUM1 A2 HEADING 'UM1';  
ITEM TUM2 A2 HEADING 'UM2';  
ITEM TDSSCATEGORY 99999 HEADING 'DSS:CATEGORY';  
ITEM TCOST\_AF 9,999,999.99 HEADING 'COST:AREA:FACTOR';  
ITEM TCOST\_CF 9,999,999.99 HEADING 'COST:CAPACITY:FACTOR';  
ITEM TCOST\_EF 9,999,999.99 HEADING 'COST:EACH:FACTOR';  
ITEM TCOST\_FAC A1 HEADING 'APP:FAC';  
ITEM CT7GSABLDG A2 HEADING 'GSA:BLDG';  
ITEM CT7GSAFAC A2 HEADING 'GSA:FAC';

MASTER CATTAB3 INSERT=KEYED(CAT3);  
ITEM CAT3 999 HEADING '3DIGIT:CATCODE';  
ITEM CATEGORYDESC3 A15 HEADING 'CATEGORY DESCR';  
ITEM CT3UM1 A2 HEADING 'C3:UM1';  
ITEM CT3UM2 A2 HEADING 'C3:UM2';  
ITEM CT3INVEST A2 HEADING 'INV:NO';  
ITEM CT3GSACAT A2 HEADING 'GSA:CAT';  
ITEM CT3GLAN A4 HEADING 'GEN LEDGER:ACCT NUM';

MASTER STATES INSERT=KEYED(SCODE);  
ITEM SCODE A2 HEADING 'ST:CODE';  
ITEM SNAME A15 HEADING 'STATE/COUNTRY';  
ITEM SABBR A4 HEADING 'ST:ABBR';  
ITEM SPOST A2 HEADING 'POST:ABBR';

MASTER FUNCTIONS INSERT=KEYED(FCODE);  
ITEM FCODE A1;  
ITEM FDESCRIPTION A15;

```

MASTER  INSTTAB INSERT=KEYED(IT_INSNO) DISK=K;
ITEM    IT_INSNO      A5  HEADING 'INSTL:NUM';
ITEM    IT_GSA_INSNO   A5  HEADING 'GSA:INSNO';
ITEM    IT_GSA_NAME     A23 HEADING 'GSA NAME';
ITEM    IT_CITY_CODE    A4  HEADING 'GSA:CITY:CODE';
ITEM    IT_COUNTY_CODE  A3  HEADING 'GSA:COUNTY:CODE';
ITEM    IT_RU_CODE      A1  HEADING 'R U:CODE';
ITEM    IT_YEAR_ACQ     9999 INT=I2 HEADING 'YEAR:ACQD';
ITEM    IT_CITY         A23  HEADING 'GSA CITY NAME';
ITEM    IT_TRANS        A1   HEADING 'GSA:TRANS:CODE';

MASTER  COUNTYTAB INSERT=KEYED(CT_INSNO,CT_COUNTY_CODE) DISK=K;
ITEM    CT_INSNO       A5  HEADING 'INSTALL:NUM';
ITEM    CT_COUNTY_CODE A3  HEADING 'GSA:COUNTY:CODE';
ITEM    CT_COUNTY_NAME A15 HEADING 'GSA:COUNTY:NAME';
END;
=====

```

#### 5.6 CONDPROF Schema

CONDPROF schema was not developed by USACERL. Detailed description of the schema should be referred to Engineering Housing Support Center.

```

=====SCHEMA=====
MASTER RFACTOR FILENAME='CONDPROF' FILETYPE='RFACTOR'
INSERT=KEYED(RYR,A);
ITEM  RYR    AS 9999 INT=I2;
ITEM  RINDEX AS 9999 INT=I2;

MASTER CAPPRO FILENAME='CONDPROF' FILETYPE='CAPPRO'
INSERT=KEYED(INST,A);
ITEM  INST  AS A5;
ITEM  CAPP  AS A1;
=====

```

#### 5.7 FUNDTYPE Schema

FUNDTYPE schema was not developed by USACERL. Detailed description of the schema should be referred to Engineering Housing Support Center.

```

=====SCHEMA=====
MASTER FUNDTYPE KEYED(FUND_RELCODE,FUND_REQID);
ITEM  FUND_RELCODE  A5;

```

ITEM FUND\_REQID A2;  
ITEM FUND\_TYPE A4;

---

## 6. MAINTENANCE AND OPERATIONS PROCEDURES

The most frequent use of the MRPM system will be annually, from October through February. Several known users located in EHSC and HQDA require two basic function/types: (1) To generate a new database, and (2) To produce reports from a new database.

### 6.1 Generate a New Database

There are three basic functions in this section: (1) To delete all the old database, (2) To download Installation data from IFS into MRPM, and (3) To calculate resource requirement.

#### 6.1.1 Delete All Old Databases

This is a very short, simple process. Enter the system as an HQDA system administrator and select the "delete all information" options.

#### 6.1.2 Download Data Into MRPM

It is a very time-consuming process to download all Reporting Installation information. The following is the approximate process time for some Larger Reporting Installations, MACOMS, and Total Army. The smaller Reporting Installation and MACOMS (not listed here) will take less than 1 hour.

<u>Reporting Installation</u>	<u>Interactive Process Time</u>
Total Army	3 hours 30 minutes
Training & Doctrine Command	1 hour 30 minutes
Forces Command	1 hour 30 minutes
Army Material Command	1 hour 30 minutes
U.S. Army Europe	1 hour
Fort Bragg	1 hour
Fort Leonard Wood	45 minutes

#### 6.1.3 Calculate Resource

This is less time-consuming than downloading data. The following is an approximate time required for calculations for larger Reporting Installations, MACOMS, and Total Army.

<u>Reporting Installation</u>	<u>Interactive Process Time</u>
Total Army	1 hour 45 minutes
Training & Doctrine Command	1 hour
Forces Command	1 hour
Army Material Command	1 hour
U.S. Army Europe	1 hour
Fort Bragg	1 hour
Fort Leonard Wood	45 minutes

#### 6.1.4 Produce Reports from New Database

The URR is the basic report used by HQDA. The following is a calculation of the time required to create and print the URR for the larger Reporting Installations, MACOMS, and Total Army.

<u>Reporting Installation</u>	<u>Time</u>
Total Army	20 minutes
Training & Doctrine Command	10 minutes
Forces Command	10 minutes
Army Material Command	10 minutes
U.S. Army Europe	10 minutes
Fort Bragg	10 minutes
Fort Leonard Wood	7 minutes

## 7. STANDARD PROGRAMMING PACKAGES

There are four different software packages used:

1. DOS—This is the operating system used by the personal computer.
2. SIMPC Interface Package—This is a terminal emulation software package that enables you to use your PC as a full screen IBM 3270 terminal to communicate with the host computer. The HQ-IFS host computer can communicate with the IBM 3270 terminal, but not directly with a PC.
3. CMS (IBM VM-370)—This is the operating system used by the host computer. Linking of disks and manipulation of files can be done in this environment.
4. NOMAD—This is the programming language used for developing MRPM. NOMAD is a powerful database management system that allows organization of a large quantity of data and usage in a variety of ways. NOMAD is an information management tool with built-in analytic features that directly increase the ability to access, control, and use information. NOMAD is also a comprehensive fourth generation language which can be accessed from a variety of operating systems.

## 8. MANAGEMENT PROCEDURES

A toll-free 800 number should be provided to all users. This hotline should be used to report possible improvements, questions, and system failures. The success of the MRPM system depends solely on how well system operators/programmers respond to the questions and problems that users bring to the telephone hotline. The following procedure will ensure that users receive a fast response to all problems and questions:

1. The hotline operator will note the problem and take immediate action to answer questions. The names of the MRPM user and the hotline operator, along with the message and any action taken, should be recorded on a sequentially numbered, three-part report log (Figure 8-1). When a specific function is being addressed, the function name should also be recorded. The log contains a white, yellow, and red copy of the report. The last (red) copy should be entered into the official logbook immediately. The white and yellow copies are given to the processor.

2. The processor should take action on the problem as soon as possible and record any further action taken on the report log. The processor keeps the yellow copy of the report for a record, and passes the white copy to the reviewer.

3. If a system command causes the question or problem, then a reviewer should reassess the complete command to ensure that the command works as intended. This second check is for the sake of quality assurance.

4. The problem log is returned to the hotline operator, who will call the users to report the action on their specific problems. It is important to maintain this direct contact with the user, and to keep an informal relationship between the system operator and the user. When the user's problem has been resolved, the completed white form should replace the red action form in the official report log book.

5. At any step in the process, emergencies should be referred to the supervisor for review. Periodically, a supervisor should review the accumulation of reports to prioritize the problems recorded in the log, to specify action to resolve specific problems, and to delegate the workload.

6. A regular newsletter should be mailed to each user, giving a short description of new changes to the system created in response to user requests. Users and their organizations should be credited for their suggestions.

Maintenance Resource Prediction Model

Report Log

Number: \_\_\_\_\_

Report: Reporters Name/Org: \_\_\_\_\_ Tel. No.: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Message: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Action taken: \_\_\_\_\_  
\_\_\_\_\_

Related commands: \_\_\_\_\_

Review: Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Priority: \_\_\_\_\_ Sent to: \_\_\_\_\_ Date sent: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Process: Processed by: \_\_\_\_\_ Completion date: \_\_\_\_\_

Action taken: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Review: Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Approval: \_\_\_\_\_

Feedback: Date reporter called: \_\_\_\_\_

Callers name: \_\_\_\_\_  
\_\_\_\_\_

Figure 8-1. MRMP report log.



## 9. RESOURCES

There are five basic functions that must be maintained to provide full-service support:

1. Supervision
2. Training
3. Hotline
4. HQ-IFS System Maintenance
5. HQ-IFS Operations.

### 9.1 Supervision

The functions of the supervisor include scheduling training; review and assignment of report logs; management of all corrections, improvements, and problem identification. This function will probably consume 10 percent of a man-year at a GS-11 level, at a cost of approximately \$4,800 per year.

### 9.2 Training

There are three types of training:

1. Self-teaching using the system manual
2. On-site training of the user
3. Centralized (group) training.

The self-teach method requires the user to have access to a resource person to answer questions at later stages of progress. This function is performed by the hotline operator.

On-site training entails sending one person to a site for a minimum of 3 days. The user provides equipment and training room. The cost for each such session would be:

GS-11 Trainer 5 days @ \$300/day	\$1,500
Supplies, manuals, etc.	<u>300</u>
Total	\$1,800

This training method is by far the best possible training situation for both the trainer and the trainees.

Centralized training is the most expensive way to perform training in the Army. All students must travel to one central site. The central site must rent computer equipment to perform the training. (During this training each student should have a PC and no more than two students should be assigned to one PC.) This equipment may not be the same as that used by the trainees at their installations. A central Army training center must be paid to plan and conduct the training.

Estimated costs will be:

GS-11 Trainer 5 days @ \$300/day	\$1,500	
Supplies, manual, etc.	300	
Computer rental (if available) \$100/day @ 5 days	500	each
Room rental \$100/day @ 3 days	300	each
Student travel \$250/day @ 4 days	1,000	each

### 9.3 Hotline

The hotline is a telephone number that is used to answer user questions, handle user problems, and report suggestions for improvement. This number should be given to all users. The person answering the hotline should be able to either answer all basic problems or refer the request to another for action. This activity would probably consume about 5 percent of one GS-9 or \$2,300 per year.

### 9.4 HQ-IFS System Maintenance

Access to the HQ-IFS system must be provided. Since a new contract is now being awarded, accurate contract costs are not known. A budget line item of \$10,000 can be considered until a more exact cost can be obtained. Training of two GS-9 NOMAD2 programmers will take 3 months at a cost of \$15,000. The normal annual requirement will be the equivalent of one-quarter time or \$8,000 per year.

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